Introducing foresters in north-eastern Tasmania to the map of potential habitat for *Astacopsis gouldi*

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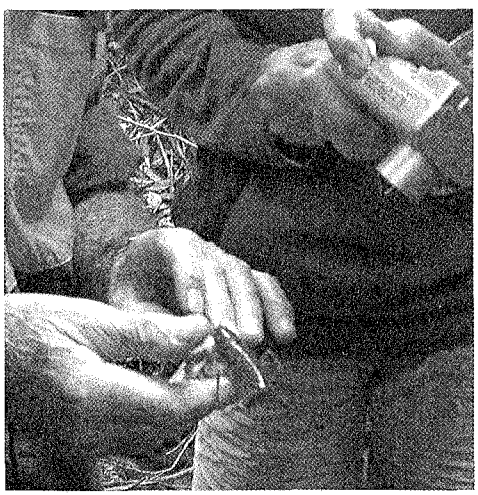
In early March 2010 the FPA biodiversity program, with the help of specialists Dr Peter Davies and Laurie Cook (Freshwater Systems), descended upon Scottsdale and the forests of north-eastern Tasmania to hold the much-anticipated second juvenile *Astacopsis gouldi* (giant freshwater crayfish) training day. The aim was to introduce Forest Practices Officers and forest planners to the potential habitat map planning tool, and followed a course run in the north-west last year (*Forest Practices News* 2009 vol 9 no 3).

The map of potential habitat was developed in 2007 by Freshwater Systems, in collaboration with the FPA and Forestry Tasmania, from the results of a research project. It illustrates potential 'habitat suitability' for juvenile *A. gouldi* across the natural range of this species. The map uses stream and landscape variables to identify potential habitat and to categorise streams into potential high-, moderate- or low-suitability habitat. The map and additional site specific information are used to guide management decisions, including protection and restoration of high-suitability habitat.

The training day was specifically aimed at introducing FPOs and planners to the map and its application in the management of headwater (class 4) streams. In the morning session, held in the Scottsdale Ecocentre, two talks reviewed the background to the development of the potential habitat map and detailed how it should be used to guide class 4 stream management in forests. Following some excellent scones and jam, the group headed out into the forest near McKenzie Rivulet to look at the tool's practical application.

Peter Davies (Freshwater Systems) takes centre stage to describe the characteristics of a high suitability class 4 stream for juvenile giant freshwater crayfish.



A lucky find: Laurie Cook (Freshwater Systems) with Astacopsis franklini, *fortuitously uncovered in a high suitability class 4 stream.*

The afternoon produced some pleasant weather for assessing a range of class 4 streams. The field training involved assessing a high,- moderate- and low-suitability habitat stream to familiarise the participants with the characteristics required for juvenile *A. gouldi*. Habitat factors – including substrate type, stream-flow permanence and the volume of logs and boulders in streams – were discussed to ensure that everyone was clear about what high-quality habitat is and what management is needed to maintain it.

The field session was peppered with live specimens of pre-prepared *A. gouldi* as well as chance encounters with *A. franklinii* (a close relative of *A. gouldi*) and *Engaeus leptorhynchus* (a species of burrowing crayfish). The live displays were thanks to the expertise of Laurie Cook and Chris Spencer.

By the end of the day everyone had an understanding of the habitat requirements for juvenile *A. gouldi* in class 4 streams, and the management required to maintain habitat quality.

The FPA biodiversity program has prepared a draft technical note on assessing juvenile *A. gouldi* habitat in class 4 streams. The technical note provides a background to the potential habitat map and direction on how it should be used in conjunction with field assessments to develop appropriate management in forestry situations. Experience of its application in the field, and subsequent discussions, have been useful in guiding further development of the document. Thanks to all who contributed comments.

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